The shift to Paris-aligned diets and investor risk in the UK retail sector

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KEY MESSAGES

- Food retailers face a new climate and sustainability front: in order to meet net zero goals, the UK must reduce meat and dairy consumption by least 50% by 2030 and beyond.
- Yet, currently, the majority of retailers are failing to face up to both long- and short-term physical and transitional climate risks associated with their meat and dairy sales.
- As markets continue to price climate risk into the value of equity securities, setting and meeting ambitious and accountable science-based targets on product emissions will become a bellwether of a retailer's long-term viability.
- Investors have the opportunity to review potential retail investments in Feedback's Meat and Climate Scorecard to assess their responsiveness to supply chain and regulatory risk.

FEEDBACK

Cover image: Aerial photo of corral full of cattle. Sandsun/Shutterstock.com

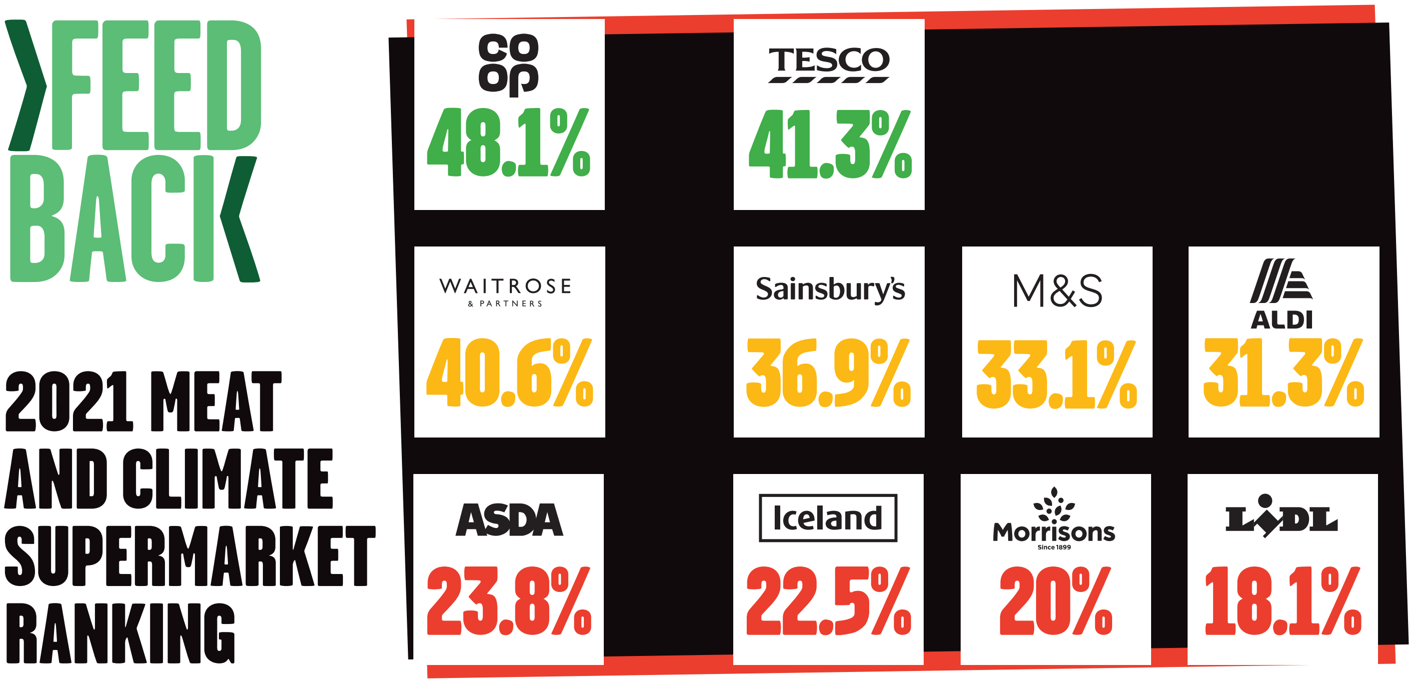
INTRODUCTION

The climate science demonstrates that urgency is high for a shift to public diets aligned with the goals of the Paris Agreement: healthy diets far lower in animal source foods, meat and dairy than is currently the norm in industrialised, high-income countries. Failure to achieve this food system shift will rule out meeting the Paris Agreement's target of limiting warming to 1.5°C above pre-industrial levels[2], a target restated with greater urgency by the August 2021 *Sixth Assessment Report* from the Intergovernmental Panel on Climate Change (IPCC)[3]. Food retailers, the dominant players within the food value chain and shapers of food environments, are uniquely positioned to drive the alignment of public diets and global climate goals, through the reduction of meat and dairy consumption. Their investors must now play their part in support of this transition or face rising physical and transactional risks as well as miss out on the benefits of a green transition to healthier and more sustainable diets.

The UK retail sector is currently seen as an undervalued and attractive market to investors. There was significant interest in the move, in summer 2021, by a US-based private equity firm to buy Morrisons, the UK's fourth largest groceries chain[4]. In August, shares in Sainsbury's, the UK's second largest retailer, hit a seven-year high amid reports of a buyout bid from another US private equity firm[5]. Investors reference the grocery sector's core importance to consumers, underlined during the Covid-19 pandemic, and the adaptability of the retail sector to the challenges the pandemic created[6]. Yet supermarket investors must also square up to the changing market that companies face, with the twin challenges of climate- and biodiversity-related risks increasingly linked to the food that retailers sell. If they do not, they will have to contend with both regulatory and supply chain impacts coming down the track, as regulators confront the decarbonisation challenge to meet their 1.5°C goals, and supply chains increasingly grapple with operational costs due to environmental degradation and rising temperatures. Beyond climate risk, the meat industry's reputation continues to be hit hard by unchecked deforestation, another area where investors are increasingly looking to future-proof their portfolios.

The past eighteen months have not only seen a year of bumper, pandemic-driven profits in the retail sector – and associated costs[7]. They have also seen civil society instigated shareholder challenges, such as the one in March 2021, which forced Tesco to set a target to increase the proportion of sales from healthier foods[8]. In parallel, investors in the fossil fuel sector, more traditionally seen as a major climate risk, are also indicating impatience with foot-dragging on climate change: one week in May 2021 saw ExxonMobil lose board seats to activist hedge fund investors and a Dutch court rule that Royal Dutch Shell must cut emissions by 45% by 2030[9,10]. Importantly, this ruling covered the emissions from Shell's customers – the users of its oil and gas, or, in emissions parlance, its 'Scope 3 emissions'. Investors are increasingly demanding Scope 3 transparency from companies: for retailers, this means a thorough assessment and public

FIGURE 1: THE 2021 MEAT AND CLIMATE RANKING



Source: Feedback (2020b)

transparency on the climate burden of the goods they sell and the supply chains through which they are produced. Scope 3 emissions represent around 88% of retailers' overall emissions burden[11]. In July 2021 more than 50 large investors called on companies to disclose their climate plans and to allow shareholders an annual vote on progress[12].

> *"More and more companies in the oil and gas and utilities industries are doing this kind of [climate-related risk] analysis, but much less so in the food industry... The pressure on the food industry needs to grow for them to prepare for climate change and how they're going to adapt and respond to that."*
> Eva Cairns, investment analyst at Aberdeen Standard Investments, quoted in the FT

This briefing makes the case for why, after fossil fuels, the food industry will be the next target of pressure to rapidly decarbonise value chains, and why cuts to meat and dairy sales – by far the largest proportion of their Scope 3 emissions – will be an inevitable part of this response. It draws on Feedback's 2021 Meat and Climate Scorecard[13], a ranking which assessed the top ten UK retailers against an extensive set of indicators covering transparency, targets and reporting, supply chain policy, and in-store practice, or 'food environments'[14].

TWO MAJOR RISKS FACING INVESTORS IN THE UK RETAIL SECTOR

Investors considering assets in the UK's retail sector face two major risks in regard to future-proofing their portfolios against climate- and nature-related risks. Both these categories contain elements of both physical and transitional risk, as retailers grapple with both social and regulatory responses to diets and climate change, and changes wrought by climate change on their supply chains.

The first risk is the viability of the industry's response to the urgent need to mitigate emissions, and the impact this will have on consumer behaviour and regulation. Scientists are uncompromising on the role of food system decarbonisation in reaching climate goals, and the role dietary change will play within this broader picture. Compelling evidence shows that, without a shift to diets low in animal source foods in parts of the world that over-consume protein, the world cannot put itself on a pathway to the Paris Agreement ambition of keeping warming to 1.5°C[2]. With 85% of land use in the UK tied up in meat production, the country simply cannot meet climate mitigation and carbon sequestration goals – let alone goals to restore nature – without shrinking this footprint[15]. Meat and dairy production represent a significant carbon opportunity cost – a lost opportunity to maintain or sequester carbon in land and ecosystems which are instead displaced to feed animals. A major global shift to plant-based diets could lead to the sequestration of almost all the carbon needed to meet an emissions budget which gives a 66% chance of limiting warming to 1.5°C[16].

The 2021 National Food Strategy, a major set piece in the UK government's post-Brexit policy overhaul, was uncompromising on the damage the current food system is doing, and the role of retailers in helping to reform it[15].

> *"Supermarkets and chain restaurants sell us the majority of the meat we eat. They will therefore have a vital role to play in tempting us to eat more plants and a bit less meat."*
> Henry Dimbleby, National Food Strategy 2021

While measures to support a reduction in public meat consumption are currently seen as controversial, they are also an inevitable response to tightening carbon budgets and pressure on the agricultural and food sector to contribute its share of emissions savings. Retailers can mitigate their climate risk by accurately measuring their Scope 3 emissions and setting targets and action plans to reduce them. This is by far the most effective climate action retailers can take to reduce their risk, and the first question investors should be asking, faced with a potential or existing UK retail investment.

The second risk lies in retailers' ability to adapt to growing environmental risk in their supply chain, and the implications for this for their social licence to operate. This is seen particularly clearly in the example of deforestation. While all major UK retailers have deforestation policies in place, these are frequently made a mockery of with ongoing revelations about the deforestation-risks inherent in their supply chains, in particular for animal feed and meat. As UK retailers scramble to present a united front – for example, with a proposed 'Soy Manifesto' – consumers and regulators will increasingly ask whether they can make good on their promises. The UK government has already moved on this, creating a new due diligence requirement on forest risk commodities in the supply chains of UK businesses[17]. The implementation of this legislation will also open avenues to legal challenge, raising the risk of legal action against retailers or their suppliers. How well UK retailers are responding to these twin risks is the subject of this briefing.

THE ROLE OF REDUCING MEAT AND DAIRY SALES IN DE-RISKING THE RETAIL BUSINESS MODEL

The urgent need to reduce animal source foods in UK diets is well evidenced. Academic studies have demonstrated not only the health benefits of eating less meat, especially highly processed and red meat products, but also the contribution this shift would make to addressing some of the planet's greatest environmental challenges[18]. But while there has been considerable discussion of 'peak meat'[19] – the point at which meat production will flatten or start to fall after years of growth – this has not translated to a widespread change in what we eat or how it is produced. During 2020, sales of many retail meat products, such sausages and bacon, grew rather than shrank, even as plant-based protein sales grew[20]. In a previous brief, *Meating the climate challenge: why supermarkets must urgently cut their meat and dairy sales*[21], Feedback presented the case for action by retailers on dietary change. This case was based on three pillars: the urgency of action on diets; the degree of influence supermarkets exert over food environments and shopping habits in the UK (see Box 1); and the barriers to true food system decarbonisation if retailers fail to act.

BOX 1: WHAT IS THE 'FOOD ENVIRONMENT' AND WHY IS IT RETAILERS' RESPONSIBILITY?

The 'food environment' is a concept which has gained ascendancy in recent years for its ability to explain complex dynamics between business practices, food consumption, sustainability and human health outcomes. The food environment is defined in one academic paper as 'the consumer interface with the food system that encompasses the availability, affordability, convenience, promotion and quality, and sustainability of foods and beverages in wild, cultivated, and built spaces that are influenced by the socio-cultural and political environment and ecosystems within which they are embedded'[14]. Many players influence food environments, which can span national, regional and hyper-local contexts. 'Food entry points', the settings in which food is made available and purchase, are crucial to food environments. In the UK, 75% of people say they visit a supermarket twice or more per week[23], and the top ten retailers control 94% of the UK groceries market[24], making them the single most common food entry point for the vast majority of UK food shoppers. While supermarkets often adopt the language of responding to demand, this narrative fails to acknowledge the enormous role they play in actively setting the conditions for demand, and their responsibility to address sales which drive highly adverse climate and biodiversity outcomes. While food environments are not the whole picture – action on supply chain policies and purchasing will also be necessary, in particular on methods of production and feed – it is currently a neglected piece of the dietary change puzzle.

FIGURE 2: A CO-OP ADVERT FOR STEAK IN BRIGHTON

The caption 'Steak night doesn't have to be rare' shows how retailers' influences on food environments are not always in line with their sustainability statements.

Source: Feedback, 2021

While the production of several marine foods – notably farmed crustaceans – have high greenhouse gas impacts[22], this brief deals primarily with the impact and action of retailers on terrestrial animal source foods, meat and dairy. This section considers four areas of risk: emissions, methane, deforestation and future regulatory change.

> *Supermarkets and the hospitality sector are extremely adept at nudging consumers towards certain products and behaviours. They can do this by changing their layouts and menus, using discounts and promotions, reformulating their own products, changing their packaging and labelling, and using their enormous purchasing power selectively.*
> Henry Dimbleby, National Food Strategy, July 2021[15]

MEASUREMENT, TARGETS AND ACTION ON SCOPE 3 EMISSIONS SHOULD BE HIGH ON INVESTORS' CLIMATE CHECKLIST

To understand the climate risk posed by meat and dairy sales, they need to be seen in the context of retailers' wider climate impacts. This requires accurate and transparent reporting. Products sourced from animals, including meat, dairy and seafood, represent by far the biggest slice of retailers' carbon emissions from the products they sell – or their Scope 3 emissions. 'Scope 3' emissions are defined by the *Greenhouse Gas Protocol* as 'emissions [that] are a consequence of the activities of the company, but occur from sources not owned or controlled by the company'[25]. Scopes 1 and 2 refer to direct emissions from sources directly controlled by a company, for example, vehicles, and emissions from the generation of electricity purchased by companies.

While estimates vary due to lack of consistent data, Scope 3 represents around 70–95% of retailers' total food retail emissions[26,27]; another analysis places it at up to seven times higher than Scopes 1 and 2 combined[28]. In other words, the emissions of the goods they sell dwarf those of retailers' direct business activities, such as running shops, delivery vehicles or supply chain refrigeration: if a retailer is not addressing its Scope 3 emissions, it is not addressing its true climate risk. Action on Scope 3 is also where retailers' climate efforts can have the most real-world impact, both influencing customer decisions towards low-carbon behaviours and, through supply chain practice, addressing major climate and nature risks, such as deforestation.

> *“It's a fantastic achievement to have halved greenhouse gases from our stores and lorries in little over a decade. However, we recognise we can do much more by helping drive decarbonisation across our supply chains and supporting our customers, the British public, to live lower carbon lifestyles through the products they buy.”*
>
> Peter Andrews, Head of Sustainability at the British Retail Consortium, May 2021

Yet the majority of retailers have failed so far to review and assess the risks posed by their Scope 3 emissions. Analysis from CDP of disclosure questionnaires submitted by food retailing businesses globally found that, of the 126 food retailers requested to disclose, only eleven reported having an absolute Scope 3 target, and three a Scope 3 'intensity' target (i.e. a target to reduce the emissions intensity of their products or supply chains, without necessarily reducing overall emissions)[a]. According to the Science-based Targets initiative (SBTi), 29 food retailers have *set or committed to set* a science-based target, six in the UK and twelve in the EU. Without this information, investors in the industry cannot gain a clear understanding of its full climate impact – and what companies can do to mitigate it.

A detailed Feedback analysis published in June 2021, the Meat and Climate Scorecard, shows a similar picture of action on Scope 3 emissions being hampered by poor data availability. Firstly, retailers are not yet consistently measuring or reporting transparently on their Scope 3 emissions. Secondly, and relatedly, they are failing to set effective science-based targets and roadmaps to reduce Scope 3 emissions.

The Meat and Climate Scorecard assessment found that, while seven out of ten retailers were collecting information of some kind on their Scope 3 emissions, only two, the Co-op and Tesco, were reporting publicly on this data[b] to date. Even where reporting is established, methodology is extremely important. Approaches to estimating emissions vary widely across different retailers, and a comparison of three retailers – two UK based, one Dutch – demonstrates the risks of reporting inaccurate figures (Figure 3).

As the table demonstrates, while Ahold Delhaize and Co-op have a relatively similar figures on Scope 3 as a percentage of total reported emissions, at around 90%, up until very recently Tesco was reporting figures showing Scope 3 as only around 30% of total reported emissions.

FIGURE 3: MIXED MESSAGES FROM 2018/2019 SCOPE 3 REPORTING FOR AHOLD DELHAIZE[27], CO-OP[29] AND TESCO[30]

	Ahold Delhaize (NL)	Tesco (UK)	Co-op (UK)
Scopes 1 and 2 combined total	3,648 ktCO_2e	1,344,440 ktCO_2e	349 ktCO_2e
Scope 3	70,800 ktCO_2e	615,246 ktCO_2e	4,669 ktCO_2e
Reported Scope 3 emissions as a proportion of total reported emissions	95%	31%	93%
Scope 3 breakdown by sales category	Meat and fish – 22% Dairy and eggs – 20% Fruit and vegetables – 5% Other food – 39% Other non-food – 12% Indirect spend – 2%	No reporting by sales category	No reporting by sales category

a This analysis is based on CDP corporate disclosure data from 2020, encompassing over 9,500 companies that responded to a request for disclosure to one or more of our three themes – Climate, Water Security, and Forests. CDP is a global nonprofit that requests companies to disclose at the behest of investor signatories and purchasing organisations. Disclosure is voluntary and all information contained therein is publicly submitted by the disclosing organisations. For more information, see www.cdp.net.

b Note that Tesco's public reporting on emissions was not awarded a point in the scorecard. This is because the methodology Tesco uses to assess Scope 3 produces results which are potentially misleading regarding the relative climate burden of the business operations versus the products sold. See Figure 3.

The retailer has now removed public Scope 3 estimates while it develops it's Net Zero roadmap, leaving investors with little idea of how the UK's biggest retailer intends to achieve it's net zero ambitions.

As other retailers move towards measuring and reporting their emissions, investors must demand both transparency and accuracy. MSCI Research, an investment advisor, points out that, while Scope 3 data is scarce and sometimes inconsistent, 'Scope 3 investment risks are mounting', with the risk of regulation or changing market demand around high emissions products growing[31].

RETAILERS AND THEIR INVESTORS MUST FIND SOLUTIONS TO HIGH METHANE EMISSIONS FROM MEAT PRODUCTION

With the IPCC's *Sixth Assessment Report* shining a spotlight on the contribution of methane to short-term warming, the world is waking up for the urgency and opportunity of action on methane[3]. Action to rapidly reduce levels of this powerful greenhouse gas in our atmosphere has the potential to lessen short-term warming and buy valuable time for the ongoing decarbonisation of the global economy. The role of animal agriculture in delivering these reductions cannot be ignored[32]: the US-EU Global Methane Agreement, published in September 2021, listed action on animal husbandry and manure management among its recommended 'targeted measures', as well as 'additional measures' including adoption of healthier diets[33]. Figures from the IPCC report show that there has been faster growth of atmospheric concentrations of methane over the last six years from both fossil fuels and agriculture, and that significantly more methane has been emitted from enteric fermentation and manure than from oil and gas in the past two decades[3].

Up to 45% of human-caused methane emissions can be reduced this decade, which would avoid nearly 0.3°C of global warming by the 2040s[32]. But these reductions cannot be achieved without looking to agriculture, which contributes 40% of anthropogenic methane emissions, overtaking fossil fuels (35%) and waste (20%)[32]. With roughly 32% of agriculture methane emissions due to livestock (i.e. emissions from manure and enteric fermentation), investors must be cognisant of the risk methane emissions represent within retailers' broader climate and environmental impacts[32].

> *"Cutting methane is the strongest lever we have to slow climate change over the next 25 years and complements necessary efforts to reduce carbon dioxide. The benefits to society, economies, and the environment are numerous and far outweigh the cost."*
> Inger Andersen, UNEP Executive Director, May 2021[34]

UK intensive boiler farm. Colin Seddon/Shutterstock.com

It is sometimes argued that since methane has a shorter life in the atmosphere, livestock does not contribute to the growth of the world's emissions so long as ruminant numbers are stable. This ignores that our task in the face of dangerous levels of warming is not to prevent emissions increasing, but to *reduce* emissions to net zero as urgently as possible. Reduction in ruminant production can yield particularly fast reductions in global emissions in the short-term because methane is such a potent greenhouse gas. Reducing ruminant production is also one of the most effective ways of ensuring cumulative longer-term greenhouse gas emissions are reduced – even if methane emissions are ignored, beef and lamb production cause considerably higher emissions than most non-ruminant meat production and plant-based foods[35].

While technological solutions to combatting methane emissions in the livestock industry, such as novel animal feed additives, are promoted by the industry, the ambitious methane reductions necessary to meet the Paris Agreement targets cannot be achieved without scaling down production. Lynch et al. (2020) argue, 'No production methods would be able to meet the ever-increasing global demand for ruminant products without significant environmental (including climate) damage.'[36] **Global meat production has more than quadrupled since 1961[37] – on this current trajectory, livestock may take 49% of the greenhouse gas emissions budget by 2030 allowable under the 1.5°C target[38,39]. Now is the crucial time for investor attention on meat and dairy reduction initiatives, including by retailers.**

GREATER AMBITION ON DEFORESTATION WILL REQUIRE MEAT REDUCTIONS

Investors are rightly concerned with the risk inherent in retailers' links to deforestation. Deforestation is a major driver of both climate change and species loss, with agriculture driving three quarters of total deforestation worldwide[40]. In fact, this year scientists reported that the 'world's lungs' are now a net emitter of carbon rather than a sink[41]. In the 2021 Meat and Climate Scorecard, all retailers demonstrated deforestation policies, such as being signatories to the Cerrado Commitment, and most had public commitments to not sourcing animal feed from legally or illegally deforested land. However, the fact remains that despite these and wider corporate commitments to end deforestation, worldwide deforestation rates show no signs of deceleration. In the face of investigations into illegal and legal deforestation in their supply chains[42–44], retailers increasingly face a stark choice: to reduce their reliance on meat fed on imported soya, or accept that they cannot meet their deforestation promises to their customers and investors.

This choice is illustrated by tensions around Brazilian public policy on deforestation risk: in May 2021, all ten major retailers in the UK signed a joint letter to the National Congress of Brazil, asking elected representatives to withdraw a legislative proposal that Brazilian activists claim will increase deforestation rather than lessen it[45]. The obvious question is what next: if agri-business and political interests in Brazil do not support the reduction of legal and illegal deforestation, will retailers withdraw Brazilian grown soya from their supply chains? In 2019 the UK imported 3.5 million tonnes of soya or soybean equivalents, 75% of which is used for animal feed – and this figure does not include soya imported indirectly through meat reared in other countries[46]. Reducing meat sales will lessen retailers' reliance on supply chains which are deeply tainted by deforestation, with the associated climate and supply chain risk, as governments increasingly look to regulation to address ongoing deforestation.

SUPERMARKETS – AND THEIR INVESTORS – FACE AN INEVITABLE SOCIAL AND REGULATORY RESPONSE TO MEAT'S ENVIRONMENTAL IMPACT

On carbon emissions, methane and deforestation, investors face an opportunity to work with retailers to grasp the nettle of animal source foods reduction, moving their businesses into a climate-safe future. If not, they await an inevitable policy response to the urgent need for Paris-aligned diets.

> *"Research by the $30 trillion FAIRR investor network, of which I am the founder, has found that some kind of carbon tax on meat could cost the industry $11.6 billion in EBITDA by 2050. Investors should be preparing for this potential outcome by conducting climate scenario analyses, integrating ESG data into their portfolio decisions and diversifying away from an over-reliance on animal protein."*
>
> Jeremy Coller, quoted in Forbes[47]

The 2021 government-commissioned National Food Strategy, published in July, signalled a 'painful reality check' on the damage the current food system is doing to public health and the environment[15]. The strategy made a clear call for a 30% reduction in meat consumption by 2032. While 30% will be insufficient to meet the scale of the challenge (the Eating Better coalition recommends a 50% reduction by 2050), this is nonetheless a telling sign of the direction of travel, with the weight of evidence on land use, climate and nature all pointing to an inevitable policy-led transition towards far less meat production and consumption.

The strategy went further: name-checking supermarkets and fast food chains as the key actors in creating this transition. It moreover reported that 50% of the UK public strongly or 'somewhat' supports a government target for supermarkets and fast food chains to sell 10% less meat by 2030 to tackle climate change (Figure 4). Only 23% were strongly or somewhat opposed[15]. This balance is likely to shift further in favour, as the ongoing trend is towards greater public concern about climate change, with 85% saying they are concerned about climate change, from 65% a decade ago in 2011[48]. The strategy also backed other Meat and Climate Scorecard recommendations on supermarkets and meat, including a call for mandatory reporting for large food businesses on sales of protein by type and origin[15]. Supermarkets reacted largely favourably to the National Food Strategy, with several supporting enhanced reporting[49], and all joining the national Courtauld Commitment's announcement a few days after the Strategy of an enhanced target to reduce product-based greenhouse gas emissions by half by 2030[50].

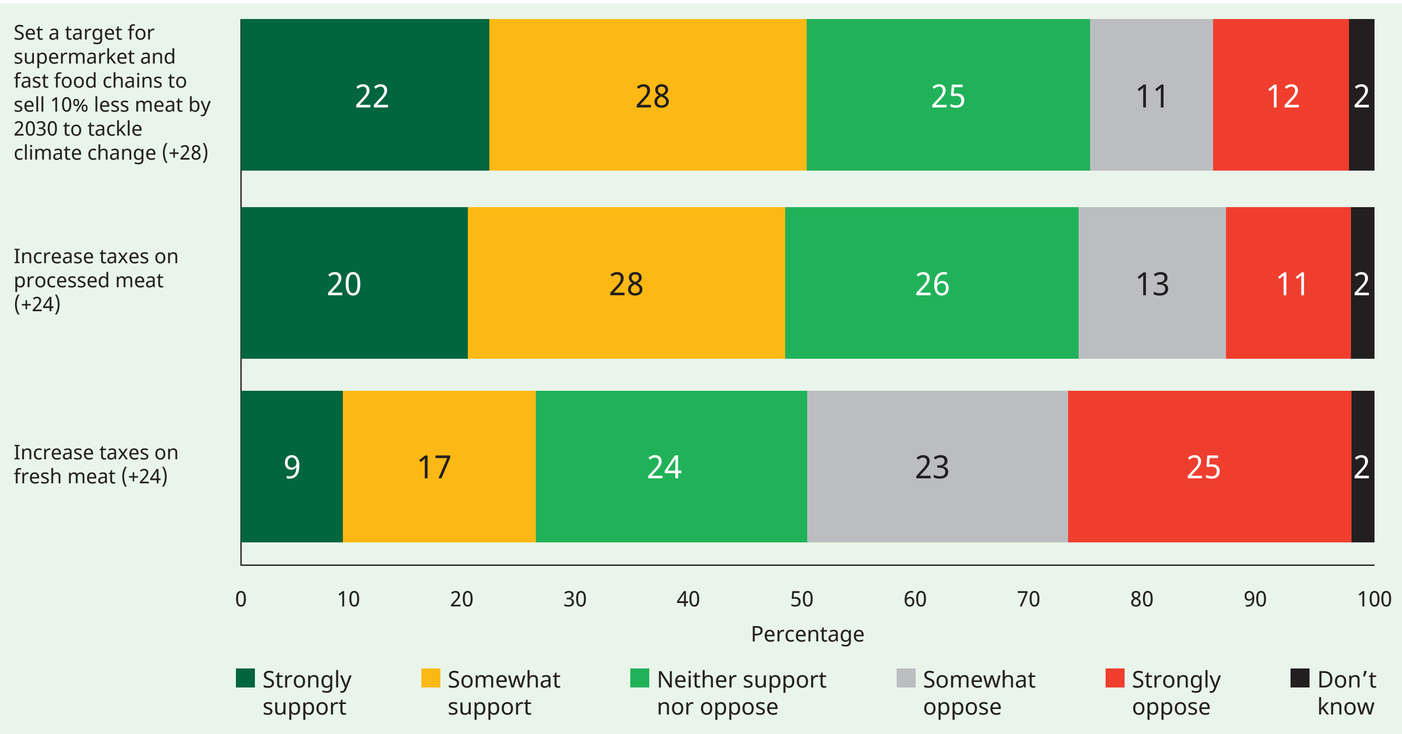
Indeed, for now, voluntary action by businesses is likely to set the agenda, giving retailers and their investors an important opportunity to differentiate their approaches to achieving Paris-aligned diets. The government has for now indicated a non-interventionist approach on food and climate, despite firm advice from the government's advisory committee, the Climate Change Committee (CCC), that this is a priority area. In June 2021, the CCC's progress report to Parliament contained a firm reminder to government that current policies will fail to meet UK net zero targets, making immediate action on 'low cost, low regret' measures to shift diets and reduce food waste a priority recommendation[51]. The CCC's recommended 'balanced pathway' to net zero relies heavily on changes in demand to deliver emissions reductions in the agriculture sector: around 60% of overall reductions from this sector come from food waste prevention (of which meat and dairy waste will carry the heaviest emissions burden) and diet change[52].

Again, the direction of travel on deforestation provides a salient comparison. Like dietary change, deforestation has been historically tackled through a voluntary, business-led approach. But despite its preference for a 'light touch' regulatory environment, the government is shortly to introduce binding due diligence obligations on retailers and other businesses who use forest risk commodities in their supply chains[53], and there is significant pressure for additional regulation to include the financing of forest risk supply chains[54]. This move follows considerable corporate action on deforestation, which has nonetheless been insufficient to meet the scale of the challenge.

It remains to be seen whether the government will seize the opportunity of its planned White Paper response to the National Food Strategy to make some commitments on sustainable diets. But, whether or not this opportunity is made use of, the weight of evidence, expert opinion and the UK legal framework to reach net zero makes an eventual policy response inevitable.

FIGURE 4: NATIONAL FOOD STRATEGY POLLING ON TACKLING MEAT SALES

The first poll shows that 50% support a target for supermarkets to sell less meat while only 23% are opposed[15]



Source: Feedback (2020b)

RETAILERS' CURRENT RESPONSES TO THE MEAT AND CLIMATE CHALLENGE ARE INADEQUATE

INADEQUATE NET ZERO STRATEGIES EXACERBATE CLIMATE-RELATED RISK

Whether or not retailers are adequately facing up to the transitional and supply chain risks confronting their businesses in relation to climate and meat is a key question for investors to answer. Currently, retailers' response to broader climate risk largely takes the form of climate commitments or net zero strategies. To assess the degree to which these strategies mitigate the climate risk inherent in their meat and dairy supply chains, it is necessary to dive into the detail.

Data from SBTi shows that, at the time of this report's publication, only two of the UK's major food retailers have committed to setting a science-based, independently audited emissions reduction target[55]: SBTi are currently developing a net zero standard for companies to adopt[56]. Where retailers do adopt net zero targets, how these are constructed, monitored and delivered is vitally important. 'Net zero' involves two processes – a decarbonisation process, which reduces the company's absolute emissions output, and an 'offsetting' process, which balances out emissions not reduced through decarbonisation plans[c]. These offsets rely on a variety of technical options, from the well evidenced, such as reforestation, to the so-far unproven, such as bioenergy with carbon capture and storage (BECCS), which are extremely controversial[58–60].

The net zero model has come under concerted criticism, most recently from the UK's Climate Crisis Advisory Group, which warned in August 2021 that net zero targets are 'no longer adequate to avoid large-scale global disaster' and instead called for 'net negative' strategies[61]. Considerable criticism has also come from organisations and Indigenous and frontline groups concerned about the justice and equity implications of companies' plans to 'emit now, offset later'[60]. Other authors have pointed out the scientific limitations of the reliance on offsetting inherent in the concept of net zero, due to the limited capacity of natural carbon cycles to absorb the huge quantities of carbon generated by human activities that has already been released and continues to be released[58]. In addition, the potential of even 'natural' emissions-sequestration methods, such as reforestation, is uncertain in the context of the disruption to the natural world posed by global heating[58].

It is not sufficient for companies, including supermarkets, to gesture to net zero announcements as proof that they are responding to the climate challenge: such strategies will come under increasing scrutiny, in particular on their use of offsets, and whether they sufficiently address the risks posed by Scope 3 emissions. The pressure to come up with a plan will increase in 2021 and 2022, with supermarkets among other UK food businesses adopting a goal to halve Scope 3 emissions by 2030[50]. **Science-based targets, approved by the SBTi, and encompassing absolute targets and pathways to at least halve Scope 3 emissions, alongside wider business emissions, are a minimum standard that retailers must meet to assure their investors they are taking proactive steps to de-risk their supply chains and business models.**

An exploration of the current carbon reduction targets and positions adopted by three major UK retailers – Tesco, Morrisons and Co-op (Box 2) – helps to illustrate the range of current climate commitments.

BOX 2: FOUR UK RETAILERS ON SCOPE 3

TESCO

Tesco, the UK's largest retailer, has been hampered in its efforts to cut emissions by its failure, to date, to meaningfully measure and set targets for Scope 3 emissions (see Figure 3 and discussion). A new net zero target to halve Scope 3 emissions by 2050, announced in September 2021, was welcome, but failed to properly address the scale and urgency of the decarbonisation task and Tesco's responsibility in meeting it. A 2050 deadline effectively gives Tesco 29 more years to continue with high Scope 3 emissions, and while its focus on addressing emissions through customers' diets is one of the few direct retailer statements on this issue, it lacks a realistic plan for how it will do this. So far, Tesco's work on dietary change has focused on its widely promoted target to increase plant-based protein sales by 300% (a figure published without a baseline). But Tesco is yet to acknowledge that more plant-based does not necessarily mean less meat[63] – a vital step-change for the industry in their decarbonisation journey.

Sainsbury's

Sainsbury's was one of the first supermarkets to announce a net zero commitment, in early 2020. However, this announcement explicitly excluded Scope 3 reductions. This was corrected in March 2021 with a target to cut Scope 3 by 30% by 2030. Its press release includes plans to 'endeavour to help customers make more sustainable product choices, helping them live well now and into the future'. Sainsbury's has yet to set a target for the role of meat and dairy reductions in achieving its Scope 3 targets. Sainsbury's has not indicated how it will meet the Courtauld Commitment's target which increases their ambition to 50% by 2030.

c The SBTi (Science-Based Target initiative) defines 'net-zero' as, firstly, achieving 'a scale of value-chain emission reductions consistent with the depth of abatement achieved in pathways that limit warming to 1.5°C with no or limited overshoot' and secondly as 'to neutralise the impact of any source of residual emissions that remains unfeasible to be eliminated by permanently removing an equivalent amount of atmospheric carbon dioxide'[57].

BOX 2: FOUR UK RETAILERS ON SCOPE 3 CONTINUED

Co-op, the only cooperatively owned retailer in the UK, holds a short-term milestone to reduce the emissions impact of products by 11% by 2025, with progress reported publicly. It has not indicated how it intends to meet the significant increase of a 50% reduction by 2030, outlined in the 2021 Courtauld Commitment. They describe a policy to 'help customers and members move to lower carbon lifestyles'[64], with a move to price match own-brand plant-based products with their meat or dairy equivalents. They have also linked the pay of the CEO of the food section of the business to carbon reduction targets. However, Co-op still lacks a target to directly reduce meat and dairy sales, and their public advertising, like that of most retailers, is not always in line with their stated goals (see Figure 2).

Morrisons, currently in negotiations regarding a private equity takeover, has taken a different tack: rather than focus on the need to reduce the absolute emissions burden of the goods they sell, they have leveraged vertical integration in their company to set a goal to be completely supplied by 'net zero carbon farms' by 2030. The approach envisages 'net zero carbon eggs' to be the first to hit the shelves, and 'net zero carbon beef' to be the last, using a combination of carbon reductions in production and UK farm-based offsets[65]. Experts have pointed out that, without reducing the amount of meat and dairy Morrisons sells, hitting its targets is likely to be impossible, and that the strategy's reliance on offsets is deeply problematic[66].

RETAILERS WON'T ADDRESS SCOPE 3 EMISSIONS, OR REACH 'TRUE ZERO', WITHOUT ADDRESSING MEAT AND DAIRY

Retailers are not yet publicly acknowledging the well-evidenced role that meat and dairy reduction must play in their decarbonisation pathways – but this must now change. **Despite signs of progress in retailers' responses to Feedback's research, with several mentioning future 'sustainable diets' targets in their private responses, the field is still open for a first mover adoption of clear and ambitious meat and dairy reduction targets.** Importantly, this must include implementation across the retail business model.

Data from reporting by Dutch retailer Ahold Delhaize, and evidence from other sources[67], indicates that animal source food products represent around 40% of overall Scope 3 emissions. While this is an estimate, it is congruent with a large body of scientific research demonstrating that animal source foods, in particular beef and dairy, are far more greenhouse gas intensive than plant-source foods. It is therefore evident that any strategy to effectively meet an absolute Scope 3 target will need to include action to reduce sales of meat and dairy products. Yet while all UK retailers are in theory signed up to a recent target to achieve a 50% absolute reduction in greenhouse gas emissions associated with food and drink consumed in the UK by 2030[50], there is little sign that they have identified pathways to achieve these. Feedback's scorecard found that no retailers had or were considering sales-weighted targets to reduce sales of meat and dairy.

The current hesitancy to get to grips with meat and dairy is demonstrated by the language used in the British Retail Consortium's (BRC, an industry body) 2020 *Climate Action Roadmap*[68]. This roadmap sets out a framework to guide the industry to net zero, signed by nine of the ten retailers assessed in Feedback's scorecard. The roadmap encourages retailers to 'fully consider' Scope 3 emissions, stating that Scope 3 is likely to contribute 80–90% of food retailers overall emissions[68]. In addition, a key plank of the roadmap is ensuring that the products retailers sell are net zero by 2040.

Yet, despite gestures towards the role of changing the make-up of retail sales, the BRC's roadmap stops short of acknowledging the role of meat and dairy reduction outright. Indeed, on a page setting out the fact that emissions directly associated with livestock production – including enteric fermentation and manure management but excluding embedded emissions in feed – represent 62% of total agricultural emissions, the roadmap states only: 'Some emissions, particularly methane from enteric fermentation in ruminant animals, are forecast to remain stubborn despite improvement measures, and these will need to be compensated by farmland carbon storage and other measures'[68].

BOX 3: EMISSIONS INTENSITY REDUCTIONS WILL NOT MEET THE SCALE OF THE CHALLENGE – ABSOLUTE REDUCTIONS ARE NEEDED

A common refrain, when retailers are asked how they intend to make product-related emissions reductions, is to refer to current or future innovations which will reduce the emissions intensity of livestock production. This stance sees companies point to as yet unproven future technologies as a reason to avoid or delay immediate action on decarbonisation. It also enables retailers to point to relative reductions in the emissions intensity of products, particularly meat and dairy, while growing their overall Scope 3 footprint. While on an individual company by company basis this approach may be attractive, from a global perspective – the only perspective that matters when it comes to climate change – it is disastrous. The window to meet 1.5°C is narrowing; it will require a full economy effort to avoid missing it entirely. Industry agreements, and regulatory responses, will be necessary to ensure a sector-wide approach to this challenge.

Where sectors are ‘hard to decarbonise’ – like the oil and gas industry – there remains an obvious and inevitable choice: shrink them. **Presenting agricultural emissions reductions, which can be very easily achieved by changing diets, as ‘hard to decarbonise’ demonstrates a wilful refusal to engage with the science on the food system and climate change – and a stance that investors must challenge as the pressure to set and meet ambitious climate targets intensifies.**

Net zero strategies warrant deeper due diligence from investors, in order to ensure they do not ignore the structural climate problem posed by retailers’ business model: their Scope 3 emissions and the large slice of these represented by meat and dairy sales. Full decarbonisation, to meet targets to limit warming to 1.5°C, implies very steep cuts in emissions[69] – cuts which retailers cannot achieve without major changes in what they sell and how it is produced. Investors must not allow retailers to continue to avoid the difficult maths of decarbonisation by skirting an elephant in the room: the emissions burden of the products they sell.

INVESTOR RECOMMENDATIONS ON RETAIL AND CLIMATE RISK RELATED TO MEAT AND DAIRY

Like the oil and gas industry, the food retail sector is overdue a reckoning with the impact of the products they sell on the planet. While the signs are ripe that supermarkets in the UK acknowledge the growing urgency of action on the climate and environmental impacts of normalised over-consumption of meat and dairy, they need the support and confidence of their investors to turn private concern into public action. **This action must take the form of absolute and science-based targets to drastically reduce Scope 3 emissions; targets to halve meat and dairy sales by the end of the decade, through action at corporate level, in store and across the supply chain; and public reporting on progress.**

Investors reviewing their portfolios or considering investments in the UK retail sector have an opportunity to:

- Identify retail investments which are facing up to the challenges of the future by drawing up and implementing plans aligned with science-based climate targets, particularly for their Scope 3 emissions.
- Challenge existing investments to reassess the risk their product portfolio and sales expose them to long-term, and to take swift action to course correct.
- Investigate the co-benefits of investment in the alternative protein sector, including under-explored, low-impact proteins like unfed aquaculture product (mussels and oysters).

While alternative investment options exist outside meat and dairy supply chains, for example in the rapid growth in alternative proteins[70], it is also vital – and long-term will reap greater rewards – that investors engage their retail holdings on these issues. UK retail continues to be the major intermediary between consumers and producers, and a climate-driven dietary shift will be led from the shelves of our supermarkets: there is a clear opportunity for market leaders to seize the initiative to deliver a supermarket which is congruent with a 1.5°C world.

The good news is that – unlike untested technology for offsets, which may deliver results, or may not – addressing the emissions burden of their meat and dairy sales presents retailers with a clear, fair and effective decarbonisation pathway. In addition, many options for increasing uptake of healthy, sustainable diets with less meat and dairy, including the type of nudges already experimented with in sugar reduction and promotion of fresh fruit and vegetables, are available to retailers, yet remain untested. The Meat and Climate Scorecard sets out a series of initial steps available to retailers, from taking the most emissions-intensive and biodiversity-impactful products off shelves, to weighting loyalty points to fresh produce purchases, and changing labelling to avoid mixed messages about the impact of the meat they sell[13].

The case for bold action is clear. It is up to investors to ensure that retailers do not hesitate to take it.

ANNEX 1 THE MEAT AND CLIMATE SCORECARD 2021

CATEGORY NAME	INDICATOR OF PROGRESS	SOURCE	SCORING
Transparency: show us the climate and environment impact of your meat and dairy sales	Collect and publish information on meat and dairy sales as a proportion of overall food sales (or a proportion of a food category, such as protein sales)	Questionnaire	+1 if information collected; +2 if published
	Accurately measure scope 3 emissions for all products sold	Questionnaire	+1 if provide evidence of measuring scope 3 emissions
	Report publicly on scope 3 emissions for all products sold	Questionnaire	+1 if scope 3 emissions data reported publicly; +2 if scope 3 emissions reporting broken down by sales category
	Commit to reporting against Eating Better's 'better meat' metrics	Questionnaire	+1 if reporting against or stating clear intention to report against these metrics
	Map soya production in livestock supply chain	Questionnaire	+1 if yes, 0 if no
Commitment: Lead by addressing the climate burden of your products	If using a 'Green Bond' or 'Green Loan' mechanism, ensure KPIs for the loan include targets to reduce emissions generated by products sold (scope 3)	Publicly available information	-1 if Green Bond does not include scope 3 emissions; +1 if Green Bond does include scope 3 emissions; 0 if no Green Bonds issued
	Set an ambitious long-term target to reduce scope 3 emissions from products sold, by 2030	Questionnaire	+1 if scope 3 targets set; +2 if scope 3 target seeks to halve emissions; -1 if no scope 3 reporting or targets
	Set interim scope 3 emissions reduction targets	Questionnaire	+1 if have an interim scope 3 reduction targets
Commitment: Lead by selling less meat	Set a sales-weighted target to halve meat sales by 2030	Questionnaire	+2 for target to reduce or halve meat sales
	Set a target for increase in fruit & veg as % of food procurement.	Food Foundation (reference 1)	Scored by the Food Foundation's traffic light: 0 red, 0.25 orange, 0.5 yellow, 1 green
	Adopt and operationalise the 'Peas Please' (aka 'Veg') pledge to encourage consumption of fruit and vegetables	Food Foundation (reference 2)	+1 if adopted pledge; +2 if evidence of operationalisation
	Set sales-weighted targets for sustainable protein and plant-rich foods	Questionnaire	+1 if target to increase sales of non-meat proteins
	Assign a proportion of marketing spend to promote plant-rich whole food diets	Questionnaire	+1 if evidence of deliberate marketing spend on plant-rich diets
	Assign a proportion of R&D budget towards supporting a transition to plant-rich whole food diets	Questionnaire	+1 if evidence of research or trials into dietary transitions or plant-rich diets
Commitment: Lead by sourcing and selling better meat	Adopt an antibiotics policy which bans suppliers from using antibiotics routinely to prevent disease	Questionnaire (verified by Alliance on Antibiotics)	+1 for ban on routine use of antibiotics
	Set a target for % of products produced under sustainable production practices and monitoring.	Food Foundation (reference 3)	Scored by Food Foundation stoplight: 0 red, 0.25 orange, 0.5 yellow, 1 green
	Set a target to end soya-dependence in livestock supply chain	Questionnaire	+1 if full target to reduce soya entirely; +0.5 if working to reduce soya, but either not eliminate or lacks clear target
	Set a target to maximise use of non-human edible food surplus for animal feed	Questionnaire	+0.5 if action taken, +1 if they have set a clear target
	Invest in R&D into novel animal feed ingredients (clarifying the environmental case for new feed sources before they are operationalised)	Questionnaire	+1 if yes, 0 if no
	Create a public commitment to not sourcing feed from either legal or illegal forest clearance	Publicly available information	+1 if yes, 0 if no
	Achieve a score of over 50% in the Global Canopy Project's 'Forest 500'	Forest 500 - Global Canopy Project (reference 4)	-1 if scored less than 50%; 0 points if over 50% or not assessed by Global Canopy
	Sign the Cerrado Manifesto and take punitive action against suppliers who break principles of the Cerrado Manifesto, or otherwise contribute to legal or illegal deforestation	FAIRR Cerrado Manifesto and publicly available information	+1 point if signatories; +2 if evidence of action
	Provide evidence of progress towards a target to halve meat and dairy waste by 2030 (as part of the wider SDG 12.3 to halve food waste from farm to fork)	Questionnaire	+1 if evidence of action and specifically consider meat and dairy waste, not just food waste; 0 points if signed a commitment but no evidence of action specifically on meat and dairy waste
Practice what you preach: incorporate climate goals into corporate culture	Offer net zero pension options across workforce	Questionnaire	+ 1 if yes, 0 if no
	Link board member remuneration packages to long-term environmental outcomes, such as achieving scope 3 emissions targets	Questionnaire	+2 yes, 0 no
	Incorporate sustainable food sourcing and consumption principles into buyer training packages	Questionnaire	+1 yes, 0 no
Show us on the shelves: help customers find and buy less and better meat products			
Product availability	Remove meat and dairy products with links to deforestation or land use change from the shelves	Online shop/website	+1 if yes, 0 if no
	Ensure more than 25% of ready meals are vegetarian or vegan	Eating Better (reference 5)	+1 if yes, 0 if no
	Ensure that stores offer more than 20% of meat and dairy which is free range or organic c	Based on an assessment of poultry products listed on online shop or website in May 2021	+1 if more than 20% of options on offer are free range or organic, 0 if no
	Ensure stores have meat and dairy on offer which conforms to standards which contribute to regenerating nature (e.g. Pasture for Life assured)	In store visit / online shop (reference 6)	+1 if yes, 0 if no
Promotions and pricing	Weight loyalty card points towards healthy and sustainable foods, prioritising whole foods over processed foods	Publicly available information	0 if no points system, -1 if points system does not reward sustainable choices
	Prioritise fruit, vegetable and whole food proteins (such as legumes) in online recipes and meal marketing	Based on an assessment of most prominent recipes listed on retailer website	+1 if over 50% of featured recipes marketed during week assessed were vegetarian or vegan
	Do not offer regular promotions on meat and dairy products, except where they are close to expiry dates to avoid food waste	In store visit	-1 if yes, 0 if no
Store layout	Include plant-based alternatives in the dairy aisle	In store visit	+1 if yes, 0 if no
	Include plant-rich protein options in the meat aisle	In store visit	+1 if yes, 0 if no
Product labelling	Do not use misleading labelling such as 'fake farm' brands on own brand products	In store visit /online shop	-1 if yes, 0 if no
	Do not use unregulated labels such as 'higher welfare' on own brand products, where these are not associated with a specific external accreditation standard	In store visit	-1 if yes, 0 if no
	Include information on production methods and animal feed on meat and dairy labelling	In store visit	+1 if yes, 0 if no

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6) Based on proxy: % of organic or free range chicken products listed in online shop category, out of total number of chicken products meeting minimum standards. Aldi (4.17%), ASDA (1.05%), Co-op (0.0%), Iceland (0.0%), Lidl (0.0%), M&S (18.9%), Morrison’s (13.9%), Sainsbury’s (8.1%), Tesco (14.1%), Waitrose (17.3%)

POINTS AVAILABLE	ALDI	ASDA	CO-OP	ICELAND	LIDL	M&S	MORRISONS	SAINSBURY'S	TESCO	WAITROSE	TOTAL POINTS AWARDED
2	0.00	1.00	0.00	1.00	0.00	0.00	0.00	1.00	2.00	0.00	5.00
1	1.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00	7.00
2	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00
1	0.00	0.50	0.00	0.00	0.00	0.50	0.00	0.00	1.00	0.50	2.50
1	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	10.00
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-1.00	-1.00	0.00	-2.00
2	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	8.00
1	0.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	2.00
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1	0.5	0.25	0.25	0.25	1.00	0.25	0.25	0.50	0.50	0.25	4.00
2	2.00	2.00	2.00	0.00	2.00	0.00	0.00	2.00	2.00	2.00	14.00
1	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00	1.00	0.00	4.00
1	1.00	0.00	1.00	0.50	0.00	1.00	0.00	0.00	1.00	1.00	5.50
1	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	6.00
1	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	9.00
1	0.50	0.25	0.50	0.25	0.25	0.50	0.25	0.25	0.50	0.50	3.75
1	0.00	0.00	0.00	0.00	0.00	0.50	0.50	0.00	0.50	0.50	2.00
1	0.50	0.50	0.50	0.50	0.00	0.50	0.00	0.00	1.00	0.50	4.00
1	1.00	1.00	1.00	0.50	1.00	1.00	1.00	1.00	1.00	1.00	9.50
1	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	8.00
0	-1.00	-1.00	0.00	0.00	-1.00	0.00	-1.00	0.00	-1.00	0.00	-5.00
2	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	20.00
1	0.00	1.00	0.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00	4.00
1	0.00	0.00	1.00	1.00	0.00	0.00	0.00	0.00	0.00	1.00	3.00
2	0.00	0.00	2.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	3.00
1	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	5.00
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1	1.00	1.00	1.00	0.00	0.00	0.00	0.00	0.00	1.00	1.00	5.00
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0.00	0.00	-1.00	-1.00	-1.00	0.00	0.00	-1.00	-1.00	0.00	-5.00
1	1.00	0.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00	4.00
0	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-10.00
1	0.00	0.00	1.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00	4.00
1	0.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00	0.00	3.00
0	-1.00	-1.00	0.00	0.00	-1.00	-1.00	0.00	0.00	-1.00	0.00	-5.00
0	0.00	-1.00	0.00	0.00	0.00	0.00	0.00	-1.00	-1.00	0.00	-3.00
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

SCORE OUT OF 40	**12.50**	**9.50**	**19.25**	**9**	**7.25**	**13.25**	**8.00**	**14.75**	**16.50**	**16.25**
PERCENTAGE	**31.3%**	**23.8%**	**48.1%**	**22.5%**	**18.1%**	**33.1%**	**20%**	**36.9%**	**41.3%**	**30.6%**
RANKING	**6th**	**7th**	**1st**	**8th**	**10th**	**5th**	**9th**	**4th**	**2nd**	**3rd**

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